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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,336	12/12/2001	Michael Hack	UDC-0002	1742
7590 09/10/2004 Woodcock Washburn LLP 46th Floor One Liberty Place Philadelphia, PA 19103			EXAMINER NGUYEN, TU X	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/020,336	Applicant(s) HACK ET AL.	
	Examiner Tu X Nguyen	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 52-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1 Applicant's arguments with respect to claims 1-51 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3 Claims 1-5, 10, 13, 15-22, 25-28, 30, 33 and 37-39, are rejected under 35 U.S.C. 102(e) as being anticipated by Wilcox et al.(US Pub. 2002/0090980).

Regarding claim 1, Wilcox et al. disclose a display communication device comprising:

a housing (10, fig.1 and par.53) that contains a processor (a processor is inherent included for a cell phone to make calls as well as transmit/receive data communications)

means, coupled to the processor, for receiving input radio signals (see par.0053, a processor is inherent included for a cell phone to make calls as well as transmit/receive data communications); and

a collapsible display (see 24, fig.1 and par.0026) that is mechanically coupled to an interior of the housing (see par.0026-0027, "within the housing of the cell phone" reads on "interior of the housing") and electrically coupled to the processor (see par.0015),

wherein the display is collapsible into the interior of the housing has a viewable surface area that is larger than any cross-sectional area taken through the housing (see par.024, most of mobile phones are usually less than 5 inches in height, therefore, 10 inches measured diagonally is larger than cross-sectional area taken through the housing) and wherein the processor is adapted to extract display data form the input radio signals, and to provide a representation of the display data to the display (see par.0015),

Regarding claims 2-3, Wilcox et al. disclose means for transmitting output radio signals, and the processor is further adapted to receive commands from the display and to form the output radio signals based on the received commands (see par.0030).

Regarding claims 4-5, Wilcox et al. disclose a speaker, microphone (see par.0053).

Regarding claim 10, Wilcox et al. disclose the housing contains a low voltage power supply (see par.0040).

Regarding claim 13, Wilcox et al. disclose third generation digital radio standards (see par.006).

Regarding claim 15, Wilcox et al. disclose the display is a flexible display and the communication device comprises a rod that is rotationally coupled to the housing and

fixedly coupled to a first end of the display such that the display can be wound around the rod (see par.0027).

Regarding claim 16, Wilcox disclose the rod is contained within the interior of the housing (see par.0027).

Regarding claim 17, Wilcox et al. disclose the rod is coupled to the exterior of the housing (see par.0037).

Regarding claim 18, Wilcox et al. disclose a locking mechanism for holding the display in an extend position (see par.0027).

Regarding claim 19, Wilcox et al. disclose a foldable display and a first end of the display is coupled to the housing such that the display can be folded into the interior of the housing (see par.0027).

Regarding claims 20-21, Wilcox et al. disclose the display provides touch signals to the processor and the processor performs responsive operations in response to receiving the touch signals (see par.0030).

Regarding claim 22, Wilcox et al. disclose display memory for storing display data that corresponds to information currently being displayed (see par.0039).

Regarding claim 25, Wilcox et al. disclose the display memory is contained in the housing (see par.0039).

Regarding claims 26, Wilcox et al. disclose the display is removably coupled to the housing (see par.0037).

Regarding claim 27, Wilcox et al. disclose the display is adapted to be removably coupled to each of a plurality of different types of external devices (see par.0013, 0034).

Regarding claim 28, Wilcox et al. disclose the display is adapted to automatically configure to the external device to which is coupled (see par.0013, 0034).

Regarding claim 30, Wilcox et al. disclose the display includes a plurality of bistable pixels (see par.0025, 0029, 0031).

Regarding claim 33, Wilcox et al. disclose the processor includes a microprocessor (see par.0039).

Regarding claim 37, Wilcox et al. disclose the display comprises a plurality of self-configurable pixels (see par.031).

Regarding claim 38, Wilcox et al. disclose each pixel includes a local processor and a memory that contains a pixel address associated with the pixel (see par.0029-0030).

Regarding claim 39, Wilcox et al. disclose the pixels are adapted to configure themselves with respect to grayscale and resolution (see par.0031).

Claim Rejections - 35 USC § 103

4 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5 Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. (US Pub. 2002/0090980).

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Regarding claim 6, Wilcox et al. fail to disclose the processor is adapted to form the output radio signals by modulating a carrier signal with a representation of the input audio signal. An Official notice is taken that the concepts of modulating signals before transmit are well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention an audio signals being modulated into higher frequency in order to transmit signals in an air-interface communications.

6 Claims 7-9, 29 and 35-36 and 49, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Wilk (US Patent 6,643,124).

Regarding claims 7-8, Wilcox et al. fail to disclose determine whether the input audio signals are telephone signals or commands.

Wilk discloses determine whether the input audio signals are telephone signals or commands (see col.9 lines 42-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Wilk in order to provide hand-free mobile device.

Regarding claim 9, the modified Wilcox et al. disclose adapted to connect to the Internet (see Wilcox, par.0025).

Regarding claims 29 and 49, Wilcox et al. fail to disclose the display data is video data.

Wilk display flexible video screen (see col.8, lines 65-66). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made

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to modify the system of Wilcox et al with the above teaching of Wilk in order to provide video screen for display video data.

Regarding claims 35-36, Wilcox et al. fail to disclose the device is voice activated.

Wilk discloses the device is voice activated (see col.9 lines 27-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Wilk in order to provide hand free operation.

7 Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Gildea et al. (US Patent 5,589,835).

Regarding claim 12, Wilcox et al. fail to disclose the means for receiving input radio signals is a smart antenna.

Gildea et al. disclose the means for receiving input radio signals is a smart antenna (see col.3 lines 60-61). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Gildea et al. in order to provide a GPS smart antenna to determine a geographical location of the mobile device.

8 Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Gettemy et al. (US Pub. 2003/0098857).

Regarding claim 23, Wilcox et al. fail to disclose the display memory is embedded into the display.

Gettemy et al. disclose the display memory is embedded into the display (see par.0030). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Gettemy et al. in order to reduce the buffer memory needs of the cell phone.

9 Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gettemy et al. in view of Pawlowski et al. (US Pub. 2003/0117382).

Regarding claim 24, Wilcox et al. fail to disclose the display memory is embedded into the pixels.

Pawlowski et al. disclose the display memory is embedded into the pixels (see par.051). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Pawlowski in order to provide continuous display in the same data over and over.

10 Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Jacobson et al. (US Patent 6,445,489).

Regarding claims 40-41, Wilcox et al. fail to disclose the pixels include groups of sub-pixels, and each sub-pixel includes a numbers of light emitting devices.

Jacobson et al. disclose the pixels include groups of sub-pixels, and each sub-pixel includes a numbers of light emitting devices (see col.8 lines 31-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Jacobson et al.

in order to provide various sub-pixel regions correspond to varying colors display without requiring separate addressing for each of the color sub-pixel regions.

11 Claims 14 and 42, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Dodabalapur et al. (US Patent 6,384,804).

Regarding claim 14, Wilcox et al. fail to disclose the display comprises a plurality of smart pixels.

Dodabalapur et al. disclose the display comprise a plurality of smart pixels (see col.2 lines 19-20). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Dodabalapur et al. in order to store one or more characteristics of each smart pixel, and to make, if indicated by the result of the measurements, a change in the control voltage such that substantially all smart pixels have substantially the same light emissions for a given signal provided to the display apparatus, as suggested by Dodabalapur et al. (see col.3 lines 41-47).

Regarding claim 42, Wilcox et al. fail to disclose the display is an organic light emitting diode display and the power supply is a thin film power supply.

Dodabalapur et al. disclose an organic light emitting diode display (see col.2 lines 10-11). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Dodabalapur et al. in order to provide an OLED display, advantages of simpler structures, excellent operating temperature, high contrast, and a wide viewing angle, and have the beneficial characteristics of light-emitting diodes (LEDs).

12 Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Dodabalapur et al. (US Patent 6,384,804) and further in view of Comiskey et al. (US Patent 6,459,418).

Regarding claim 11, the combine Wilcox et al. and Dodabalapur et al. disclose everything as claim 42 above. However, the combine Wilcox et al. and Dodabalapur et al. fail to disclose the power supply is a thin film power supply.

Comiskey et al. disclose a thin film battery (see col.15, lines 49-50). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the combine Wilcox et al. and Dodabalapur et al with the above teaching of Comiskey et al. in order to provide a thin film battery for higher current density, higher battery efficiency, easier to vary the shape and size of batteries for particular purposes.

13 Claims 31, 34 and 37-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Matsuo et al. (US Pub. 2002/0055938).

Regarding claim 31, Wilcox et al. fail to disclose a pixel address and a brightness that corresponds to a pixel located at the pixel address.

Matsuo et al. disclose a pixel address and a brightness that corresponds to a pixel located at the pixel address (see par.0094-0097 and 0176-0178). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Matsuo et al. in order to provide a display driver outputs the voltage corresponding to the decoded pixel

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data to respective row wiring and the column wiring corresponding to the decoded pixel data.

Regarding claims 34 and 37-38, Wilcox et al. fail to disclose local processing power for each pixel.

Matsuo et al. disclose local processing power for each pixel (see par.0176-0177). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Matsuo et al. in order to provide the display driver to output the voltage corresponding to the decoded pixel data to respective row wiring and the column wiring corresponding to the decoded pixel data and displays the character data on the specific position of the display.

14 Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Kang et al. (US Patent 5,452,092).

Regarding claim 32, Wilcox et al. fail to disclose compare a current image with a previous image, to identify one or more pixels having a pixel brightness that needs to be changed to convert the display from the previous image to the current image, and to provide the display with display data that causes the pixel brightness of the one or more identified pixels to change.

Kang et al. disclose compare a current image with a previous image, to identify one or more pixels having a pixel brightness that needs to be changed to convert the display from the previous image to the current image, and to provide the display with display data that causes the pixel brightness of the one or more identified pixels to

change (see col.4 lines 37-66). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Kang et al. in order to provide a changing pixel detector between previous line and a current line of data.

15 Claims 43-47, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Dodabalapur et al. (US Patent 6,384,804) and further in view of Parthasarathy et al. (US Pub.2002/0176992).

Regarding claims 43-47, the modified Wilcox et al. fail to disclose the display comprises a plurality of small molecule OLEDs, polymer OLEDs, SOLEDs, TOLEDs and photodetectors.

Parthasarathy et al. disclose the display comprises a plurality of small molecule OLEDs, polymer OLEDs, SOLEDs, TOLEDs and photodetectors (see par.0014, 0045, 0055, 0059). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. and Dodabalapur et al. with the above teaching of Partgasarathy et al. in order to provide organic light emitting devices are comprised for several organic layers in which one of the layers is comprised of an organic LEDs to have sufficient brightness, range of color and operating lifetimes for use as a practical alternative technology to LCD-based full color flat-panel display.

16 Claims 48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Dodabalapur et al. (US Patent 6,384,804), in view of

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Parthasarathy et al. (US Pub.2002/0176992) and further in view of Matthies et al. (US Pub. 2002/0050958).

Regarding claim 48, the modified Wilcox et al. fail to disclose OLEDs form bistable pixels.

Matthies et al. disclose OLEDs form bistable pixels (see par.0038). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Matthies et al. in order to provide contrast enhancement.

17 Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox et al. in view of Jacobsen et al. (US Pub. 2001/0017604).

Regarding claims 50-51, the Wilcox et al. fail to disclose the display comprises a display border and the video imager is integrated into the display border.

Jacobsen et al. disclose the display comprises a display border and the video imager is integrated into the display border (see par. 0153). Therefore It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wilcox et al. with the above teaching of Jacobsen et al. in order to provide define visual border as seen by the user through transparent window.

Conclusion

18 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

19 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 703-305-3427. The examiner can normally be reached on Monday through Friday from 8:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

TN
August 23, 2004


NICK CORSARO
PRIMARY EXAMINER